Isolasi Bakteri Asam Laktat dari Kimchi dan Kemampuannya Menghasilkan Zat Anti Bakteri

(Isolation of Lactic Acid Bacteria from Kimchi and their Ability to Produce Anti-Bacteria Compounds)

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ABSTRACT

South Korea is famous for its fermented food called Kimchi. Kimchi is a traditional Korean food fermented from pickled vegetables with a mixture of spicy seasoning. Kimchi is now one of functional food products because of there are lactic acid bacteria that are probiotic and can produce bacteriocin compounds. These bacteriocin compounds may inhibit or have anti-bacterial activity. The purpose of this study are (1) to obtain isolates of lactic acid bacteria from Kimchi packaged and Kimchi homemade and (2) to study the antibacterial agent produced by lactic acid bacteria isolated from Kimchi against *Escherichia coli* and *Staphylococcus aureus* bacteria. Tests of bacteriocin activity were conducted by *Disk Diffusion Method*. Data were descriptively analyzed. The results showed that eight isolates of lactic acid bacteria from Kimchi packaged and Kimchi homemade are able to inhibit the growth of both tested bacteria, *S. aureus* and *E. coli*. D1 isolated from Kimchi packaged has largest inhibitory capability against *S. aureus* and *E. coli* was 16 mm and 17.33 mm, respectively. Isolate from Kimchi homemade which have the largest inhibitory capability was B2 isolate. B2 isolate has inhibitory capability to *S. aureus* and *E. coli* was 16.67 mm and 17.67 mm, respectively. The ability to form the smallest inhibitory zone is indicated by isolate D2 from Kimchi homemade. The inhibitory zone of D2 on *S. aureus and E. coli was* 7.67 mm and 8.67 mm, respectively.

Key Words: Kimchi, lactic acid bacteria, bacteriosin, disk diffusion.